

### **REMARKS**

The claims have been further amended to reflect the interview with the Examiner held on December 23, 2011, at which time all of the rejections were discussed at length.

Claim 1, as currently amended, identifies a non-porous zone in the first electrode layer. This was previously referred to as a compact zone and is supported throughout the specification such as on page 8, indicating that the electrode layer may contain zones which are slightly porous or non-porous (11). This is further supported in page 4 and in the last paragraph of page 8, page 9 and page 10. Moreover, the first non-porous zone in claim 1 is recited as being located in proximity to the gas inlet dedicated to the second electrode layer for enabling transfer of the first gas through the first electrode layer. This is supported on page 4 and page 7 of the description. Page 4, lines 13-20 clearly supports the compact zone being placed around the inlet of the first gas that is not intended for this electrode such as, for example, around an oxygen inlet for the anode. Page 8, lines 8-9 and 24-25 further support the fact that the zone in the electrode layer area can be non-porous.

Claim 1 requires the non-porous zone in the first electrode layer to comprise a protuberance of the electrolyte layer which extends into the first electrode layer forming an internal seal which prevents the mixing of the first gas with the second

gas in the first electrode layer. This is also supported in the same paragraph on page 4, lines 13-20.

The rejection of claims 1-10 and 16-18 under 35 USC 103(a) as being unpatentable over Ruhl '955 in view of Itoh (US Publ. 2004/0175607) is respectfully traversed.

The amendments to claim 1 clearly distinguish the subject invention from the teaching in Ruhl and overcomes the argument of the Examiner that "if the claims were interpreted to allow the compact zone to be a protuberance of the electrolyte layer, the prior art would not be overcome".

Since the first electrode layer is now recited as including a non-porous zone, the above argument of the Examiner no longer has any merit. Moreover, the external gasket(s) of Ruhl cannot be interpreted to represent a non-porous zone and Ruhl does not teach a non-porous zone in the first electrode layer located in proximity to the gas inlet dedicated to the second electrode layer. The external gaskets in Ruhl no longer apply to claim 1, no matter how broadly claim 1 is interpreted. The same is true for Itoh.

Moreover, the electrode layers in Ruhl do not contain non-porous zones as defined in claim 1 for the first electrode layer. For this reason alone, claim 1 is patentable over Ruhl taken alone or in combination with Itoh. Itoh does not teach a solid oxide fuel cell containing a non-porous zone as defined in claim 1 much less a

first electrode layer with a first non-porous zone located in proximity to the gas inlet dedicated to the second electrode layer.

Accordingly, there is no longer any basis to support the rejection of claim 1 based on the combination of Ruhl and Itoh, and claim 1 is clearly patentable over either reference taken alone or in combination.

Claims 2-5, 8-15 and 17-18 all depend from claim 1 and are believed patentable for the same reasons as given above.

The rejection of claims 4-21 under 35 USC 112, second paragraph, is respectfully traversed.

Claim 3 has been amended to recite a second non-porous zone in the second electrode layer and claim 4, which depends on claim 3, removes the word "compact" and substitutes "non-porous". Thus, the rejection to the terminology in claim 4 no longer exists. Claim 5 has been completely amended and claims 6 and 7 canceled.

Claim 8, which now depends from claim 1, uses the language suggested by the Examiner. Claim 9 depends from claim 8 and references one of the two bi-polar plates of claim 8, and as such, is now definite. Claim 10, depends from claim 9 and also references the one bi-polar plate. Claim 11, depends from claim 10, also references the one bi-polar plate. Claim 12 defines the cavity as being located in a non-porous zone of the adjacent electrode layer, which overcomes the objection to

the language in claim 13. Claim 14 depends from claim 11 and is limited to the cavity of the adjacent layer. It should be noted that claims 6, 7, and 16 have been canceled and that claim 17 now depends from claim 1.

Claim 19 defines only a non-porous zone. The objection to the wording in claim 19, "the porosity of the dense zone...", has been deleted. Claim 20 refers to the gas inlets of claim 19 and uses the language suggested by the Examiner.

Accordingly, the rejection of claims 4-20 under 35 USC 112, second paragraph as being indefinite should now be withdrawn. Claim 21 has been cancelled.

The separate rejection of claims 11, 14 and 15 under 35 USC 103(a) as being unpatentable over Ruhl '955 in view of Itoh '607 as applied to claim 10 and further in view of Fischer et al, is respectfully traversed.

Claim 10, as explained previously, depends from claim 9, which in turn depends from claim 8 and in turn from claim 1 and is therefore patentable for all of the reasons given heretofore with respect to the patentability of claim 1.

Fischer does not teach a solid oxide fuel cell as described in claim 1 and accordingly, Fischer is not applicable to claim 1, as amended.

It is to be noted that the Examiner has not separately rejected claim 19 other than under 35 USC 112, and accordingly, claim 19, as amended, should now be

allowable.

Reconsideration and allowance of claims 1-5, 8-15 and 17-20, is respectfully solicited.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that this Preliminary Amendment is being submitted along with an RCE to the USPTO via e-mail EFS Web, addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450, on February 13, 2012.

By

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